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ABSTRACT

A review of research literature on the effective teaching of basic skills in secondary education and a description of a model staff development program provide guidelines for school administrators in improving teachers' skills. The literature identifies both classroom- and school-level factors influencing teacher effectiveness. Classroom factors involve teacher organization and planning on the first school day, students' time on task, task variety, teacher-student interaction during instruction, and the size of instructional groupings. School factors include school climate, absences and tardiness, policies regarding classroom intrusions, grading systems, teacher access to student achievement data, and parental support. Administrators wishing to foster the development of teacher skills in these areas can choose from a variety of training workshops for teachers. The author describes a model workshop program that includes a pretest phase to find what skills the staff needs, an informational phase linking theory and practice, a phase for guided practice, and a posttest or followup phase to assess changes in teacher behavior. The author also lists 15 necessary conditions for this model program. An appendix details the seven workshops that comprise the program. (RW)

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What Research Has to Say to Administrators of Secondary Schools About Effective Teaching and Staff Development

Seldom before in the history of education have school administrators been confronted with such a combination of problems that include dwindling student populations, decreasing budgets, decreasing test scores, increasing community expectations and collective bargaining. Since most administrators in schools today were trained in the 1940's, 1950's and 1960's, little of their formal education provided methods for solving these problems. While there is a burgeoning body of research on effective classroom teaching there has been very little research to guide effective school practices and policies. Studies of school programs in the late 1960's and early 1970's concluded that compensatory education money spent to provide better libraries, laboratories, school services and staff training did nothing to improve the achievement level of students (Coleman, 1966; Herrnstein, 1971; Jencks, 1972; Mosteller and Moynihan, 1972). In fact, by the mid-seventies test scores had plummeted to an all time low even for college bound high school students. Another segment of the high school population had not even mastered functional skills in reading, writing and computation. High schools in the 1970's inherited from the elementary schools extensive remediation problems resulting in part from the general practice of passing students along to the next grade

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regardless of academic achievement. Ultimately the secondary schools have borne the heaviest indictment for graduating incompetent students. Parents in several sections of the country sued school districts for not providing adequate schooling. The response of 47 states has been to enact legislation requiring students to pass minimum standards for graduation. In many states this legislation includes provisions for classes to remediate secondary students.

Research in Secondary Schools

Research during the 1970's in elementary and secondary schools does provide some guidance for effective practice. Essentially, researchers observed in samples of classrooms and identified how teachers organized their work and how they spent their time in classrooms where students made achievement gains. The following sections report findings from studies of secondary classrooms and schools.

Clarity in First Day Organization and Planning

Work by Carolyn Evertson (1979) focused upon first-day organization of 102 junior high school English and math classrooms. Several characteristics differentiated more and less effective teacher-managers. In classrooms where there was less student misbehavior and more student gain through the year:

1) Teachers made rules, consequences and procedures clear on the first day. This included teachers monitoring the students and following through with consequences for those who did not comply.

2) Teachers established a system of student responsibility and accountability for work on the first day.

3) Teachers were skillful in organizaing several instructional activities.

The Element of Time and Students on Task

A study by Stallings, Cory, Fairweather and Needels (1978), illuminated a number of instructional strategies that are effective in teaching basic skills in secondary schools. These include management of class time, interactive instruction, and focus of instruction.

Management of Time

In 14 schools the length of the class period ranged from 40-55 minutes. Such time differences were not related to gain in reading. Student learning depended upon how the available time was used. In classrooms where teachers were efficient in making assignments and allocating materials there was more time available for instruction and students gained more in reading. It is important to start on time and continue until the closing bell rings. The distribution of time across several activities during the class period was also an effective strategy for keeping students on task. Effective teachers who helped secondary students who read at the 1st to 4th-grade level gain up to two grade levels in one school year distributed time in the following way:

Instruction-giving examples, explanations, linking to student experience	16%
Review, discussion of seatwork and story content	12%

Drill and practice to help memorize	4%
Oral reading in small groups	21%
Silent reading	9%
Written assignments	4%

The percentage of time allocated to each of these activities varied across classrooms according to the achievement level of students. Interestingly, an ample amount of oral reading was helpful for the low achieving students, but was not so important for students achieving about the 4th-grade level. The oral reading was handled through lessons where vocabulary had been carefully developed, and where teachers helped students develop work concepts within a small group setting of students with similar reading skills. Students who are operating at this level need to hear and say the words as well as read and write the words. These students can usually pronounce or sound out words but often do not understand words in the context of a story. Secondary students' comprehension scores are often lower than their vocabulary scores. Oral reading allows the teacher to hear the students' reading problems, ask clarifying questions, provide explanations to help students comprehend new words, and link the meaning to students' prior experience or knowledge.

Students who were in classrooms where slight or no gain was made spent more time than other students on written assignments (28%) and silent reading (21%). They had less instruction, discussion/review, and drill/practice. Some of these students were assigned to spend entire periods working in workbooks with very little instruction from the teacher. Such classrooms often registered

more student misbehavior. Students with reading problems are likely to have shorter attention spans and the opporutnity to be involved in several activities during one class period seemed to help these students stay on-task. (See Appendix A for these data.)

Interactive Supportive Instruction

During the study of how teachers allocated time to various classroom activities it became clear that teachers who were interactive in their teaching style had students who achieved more in reading. This interactive style included providing oral instruction for new work, discussing and reviewing students' work, providing drill and practice, asking questions, acknowledging correct responses and supportively correcting wrong responses.

It was important that teachers try to include all students in classroom discussions and review sessions. The effective teachers did not call upon volunteers but rather called upon a particular student. When volunteers are solicited, the same people take part each day and many students may not be involved at all. When calling a student by name it is important to ask a question at a level where the student is most likely to be successful. However, if the student gives an incorrect response it is important that the instructor stay with that student and rephrase the question or give a clue so that the student can succeed and give a correct answer. A wrong answer can provide an opportunity for the teacher to clarify and reteach, if necessary. It is important in secondary remedial classrooms that wrong responses are handled in a supportive manner since

research indicates these students do not thrive on demeaning experiences of failure.

This interactive type of instruction is important when teaching subjects other than remedial reading. Tom Good (1980) found junior high school students learned more mathematics in classrooms where teachers were active in their instruction. These teachers made assignments and provided information in a clear manner. They asked students appropriate questions and provided immediate feedback to student responses. Unfortunately many teachers of general math students are not active in their teaching style. In a study of math classes in 11 schools, Stallings and Robertson (1979) found that teachers more often told general math students to do written workbook assignments in class and less often gave them instruction or review of seatwork than they did students in geometry or calculus classes (See Appendix B). In classrooms where students are more involved more achievement occurs. Students in general math or prealgebra were off-task significantly more often than were students in algebra II, geometry, or calculus classes.

Eleven of the teachers in the study were observed in both lower and advanced math classes. When the observations of the teachers were compared, we found the same teacher would be active with advanced classes and <u>not</u> active with the lower classes. These low-achieving students need instruction from teachers to stay on task. Programmed workbooks will not help them learn the mathematical relationships necessary to cope in life. A teacher can see in

students' faces whether or not they understand. A teacher can select another example from the students' background and explain it on the chalkboard. The most important finding in this research is that teachers need to actively teach. The advanced classes received active instruction and the less able students in general science classes received workbook assignments. This is not effective instruction for low achieving students. Relationships similar to those described in mathematics classes were found in general science and physics classes.

Focus of Instruction

If teachers are interactive in their instructional style, to whom should they focus their instruction: individuals, small groups, or the total group? During the last decade considerable energy has been directed toward the development of individualized programs. Federal, state and local funds have been spent to develop programmed reading, mathematics and science books. All of these programmed materials were aimed at providing children with activities in which they could progress at their own rates. It was assumed that if students were working at their own pace through a series of sequential exercises, learning would occur--it did for some students and not for others. In general, there has been a great disillusionment with individualized instruction. Some students learn best when new information is presented to a small group of students who are operating at a similar pace (Stallings, 1975; Stallings, Needels and Stayrook, 1979). Learning occurs when students read aloud, and hear others ask questions and respond. Hearing and speaking

as well as reading and writing helps students integrate and retain information. Individualized programs based almost totally on workbooks do not allow for this type of group learning.

At a conference sponsored by the National Institute of Education regarding instructional dimensions, sixty teachers discussed their experience with and attitudes towards individualized instruction. Teachers reported that in most individualized programs they felt relegated to being record keepers. Where workbooks were relied upon to provide instruction for students, teachers felt unable to integrate the students' learning (Amarel and Stallings, 1978). It appears that students need interactions with teachers. A teacher can develop concepts with a group and can change examples or illustrations to coincide with the group's background experience. If students do not understand, the teacher can find yet another example. Books or machines do not do that. Books or machines provide opportunities to practice and reinforce what teachers are teaching, but research suggests they are not sufficient to provide the instruction that students need (Stallings, 1975). Principals can support well-focused instruction, interactive teaching and effective use of time by making teachers aware of these findings and providing appropriate inservice training.

School Policies Related to Effective Instruction in Basic Skills

Student outcomes have been found to be related to effective classroom practices which are sometimes dependent upon school

practices and policies. Rutter (1980), found that secondary student achievement, attendance, and delinquency were related to several school variables:

- Consistent expectations of students throughout the school, e.g., be on time.
- Emphasize pupil's success and good potential, e.g., monthly awards for achievement, attendance, sports, drama, music.
- Communication and feedback to teachers and students is clear, direct, and timely.
- Teachers willing to see students for personal assistance.
- Curriculums planned jointly by staff acting together.
- School kept in good repair (encouraged students to respect surroundings and behave more appropriately).

While working with teachers to change specific behaviors, Stallings, Needels and Stayrook (1979) found several school policy variables that were related to student achievement gain. They include policies toward absences, cuts and tardiness, intrusions assignment of teachers to classrooms, assignment of students to classrooms, grading systems, availability of student information, reading in the content area, and parent support. All of these variables can be manipulated to some degree by school principals.

Absence Rate and Tardiness

A sample of San Francisco Bay Area secondary principals report that student absences contribute significantly to the problem of student low achievement (Stallings and Mohlman, 1981). In this sample, the absence rate (which included cuts) ranged from 5% to

25%. This rate is higher for low achieving students. Clearly, teachers cannot reach students who do not appear in class. However, the way teachers teach in class does have a relationship to student absences. In our study of teaching strategies in remedial reading classrooms in secondary schools we found that students were absent less often in classrooms where the following variables existed to a greater degree:

- Students perceived the classroom to be a friendly place.
- Students perceived come competition and high expectations.
- Teachers provided ample verbal instruction.
- Teachers provided instruction to the total class.
- Students sometimes were in leadership and provided information to the class--oral reports, etc.
- Students had opportunities to read aloud.

Students were absent significantly more often in classrooms where the following variables existed to a greater degree:

- Students were doing written assignments in workbooks the majority of class time.
- Students were reading silently the majority of class time.
- Teachers were doing management tasks--grading papers, making lesson plans, keeping records--and were not involved with students the majority of class time.
- Students were being disciplined for disruptive behavior.

Absence rate and tardiness needs to be brought under control at the school level as well as at the classroom level. Some of the techniques schools have successfully used are the following:

- In many families both parents work. Call at night (7:00 - 9:00 P.M.) to report absent or tardy students.

This requires volunteers or payment for someone to call consistently. One school that had a 25% absentee rate dropped this to 12% within a one-month period.

- The clergy in one school district volunteered two hours each morning. They greeted tardy students and called the parents at home or at work to report tardy or absent students. This school reduced a rate of 40% absent to 15% absent within the school year.

- Students who cut class or were tardy accumulated time that had to be made up by assisting the school custodian clean the grounds and lavatories at lunch time, after school, or on Saturday mornings. This school's absence rate dropped from 15% to 9%.

To reduce absenteeism and tardiness it is necessary to have a stated school policy with all of the penalities for non-compliance made very clear to students, parents and staff. Consistency in follow-up of non-compliance is the key to reducing illegal cuts and tardiness. If some members follow the school policy and others do not, students will spend a lot of effort trying to find where the rules can be bent. Sometimes principals have to reprimand a teacher or staff member for being too lax with tardy students and not supporting the school policy. Clarity and consistency seems to be the key to solving this problem.

Intrusions

Research by Stallings, Needels and Stayrook (1979) indicates that classrooms having more intrusions from the outside--e.g., announcements on the intercom, requests for students to leave the room, tardy students coming into the room--have students who make less gain in basic reading skills. Other school personnel (counselors, school paper editors, drama coaches, physical education coaches,

music directors, detention officers) may not appreciate how difficult it is to get a classroom of low ability students on-task and productive, and how easy it is for them to get off-task. When interruptions are allowed during class time if implies to the student that what is occurring in the classroom lacks value.

School administrators can establish clear guidelines about the sacrosanct nature of classroom teaching, i.e., if we are serious about teaching basic skills, no one disturbs a teacher when class is in session. Nothing less than a cataclysmic event should stop the teacher in progress. Some administrators allow 10 minutes for announcements at the beginning of the day rather than make announcements at random. One classroom in our study had 20 intrusions during a 45-minute period. Clearly it is difficult to accomplish academic tasks in such an environment.

Assignment of Classrooms to Teachers

This research indicates that remedial reading students make more gain where teachers have permanent classrooms. Teachers of basic skills need to be able to arrange a reading environment where student growth charts can be kept on the wall so that students can keep track of their progress. Teachers need to have diagnostic and prescriptive materials at their fingertips--and many high interest books at the right reading level. Teachers who have to shift from one classroom to another cannot achieve an environment conducive to developing basic skills.

The rooms need to be large so that students can be arranged in groups whenever small group instruction is needed. The research

indicates that working in small groups is beneficial to those students in secondary classrooms who are reading at below the fourth-grade level.

Assignment of Students to Classrooms

Students who require remediation make more progress in classrooms where the students are more homogeneously grouped. In the study previously cited, students achieving below grade four who made gains were in classes averaging 18 students (See Appendix A). The classes with students achieving between the fourth-and sixth-grade averaged 21 students and classes with students achieving above the sixth-grade averaged 26 students. These data suggest that students who are achieving at a lower level should be placed in smaller classes than students who achieve at a higher level.

Classrooms of 40 students with one or more aides assisting the teachers are still not good situations for the remedial student. These students tend to be distractible and the more bodies there are, the more distractions there are to filter out.

These data do not advocate tracking but they do suggest that smaller classes and some homogeneous grouping are more effective for basic skills classes.

Grading Systems

A variable grading system needs to be established for the remedial classes. Students who have a history of failure thrive best when they can experience daily success, for example, in programs that are set up to allow these students to make daily gains and

achieve 80% ot 100% correct scores on their exercises. These students will be overwhelmed with a sense of failure if they still receive a D or F on their report cards because they are still below grade level. Some teachers tried to console their students by saying that a 90% F is not as bad as a 30% F. However, any F means failure to students and parents and may discourage students from trying further. In view of this, several possible alternative procedures are proposed.

- Identify the course by name as a basic skills course for improvement in reading and give A, B, C, D, or F on the basis of the student's progress in the course. For example, a 10th-grade student who tested at the 2nd-grade level of reading when the course began and progressed to the 5th-grade level made excellent progress. This student received an A for improvement even though he or she is still below grade level.

- Variable credit could be earned on the basis or productivity. In a five-credit course, students who complete one-half of the work in a semester might receive two and one-half credits of C work rather than failing to receive any credit and receiving an F. Some students learn more slowly than others but they can, and do, learn if given adequate time. "Faster is not necessarily better," says Benjamin Bloom (1976).

- In systems where the previous two suggestions are not used, E, S, or N might be used to show when excellent, satisfactory, or no progress has been made.

Changing from one grading system to another is a difficult task that requires parent support as well as school staff support. A year of school planning and consulting with school systems using these systems should be allowed.

Student Information

Although teachers need information about students' reading problems and their reading level at the time classes are assigned, most teachers surveyed do not have student information easily avail-

able. Teachers feel that their ability to select materials based upon student needs would be increased if at least the reading levels of students were printed on the class lists.

To get the reading scores, teachers must go through the counselors' files and record the data available for each of the 100-150 students in their classes. This requires 5-10 minutes per student. After searching for the records, they may find that test information is not available for many students. The testing program is particularly lax in many secondary schools. Often the test data are several years old and transfer students may not have any records available until the middle or the end of the semester.

In the past we have been reluctant to make test scores easily available to teachers, believing this information might prejudice teachers' attitudes toward students. However true this might be for other subject areas, it should not apply to the teaching of basic reading skills. Here the teachers need all the information they can get. While reading grade level is not sufficient information, it will help in understanding the range of student abilities. More student information is needed since secondary students who have a history of failure in reading are likely to have some perceptual, physical or emotional problems in addition to problems of encoding, decoding and comprehension. There are some group tests developed by the Cincinnati School District that contribute this type of student information (See Reference Notes).

A strong case can be made for providing secondary teachers of reading with inservice workshops on how to diagnose reading problems and prescribe corrective treatment. Workshops on how to use these kinds of materials should be conducted in the summer so that teachers can diagnose the problems of their students during the first week of school. In some school districts this is accomplished by having students start school several days after the teachers start in the fall. The students who need remediation would be scheduled for diagnostic testing during the first few days and the teachers could select an appropriate program before school starts.

Reading in the Content Area

Teachers who must try to teach reading in the content area need textbooks that provide similar information at different reading levels. Most often such materials are not available. In that case the teacher has several options:

- Teachers may attempt to write their own materials for the students with low reading ability. Several teachers could share this responsibility.
- Teachers may try to locate or develop audio tapes of the textbook (the state produced some of these for use with the blind).
- Teachers may make extra effort to develop frameworks so that students can comprehend the key concepts.

In any case, the administrative staff needs to convene cross-department meetings to discuss and make clear a policy regarding reading in the content area. If the problem is not dealt with, many students who are bright but have low reading ability may be

penalized unfairly and not receive the information in social studies, science and math that is necessary to cope in our society.

Parent Support

Administrators can create an atmosphere where parents feel needed to help in their child's education--not only to work on school committees, but to really assist their child to learn required skills. Some skills simply need more drill or practice, and some ideas may need discussion.

Research on the effect of parents' school involvement reports a positive relationship with the children's progress under the following conditions:

- The parents are given specific tasks to do with the children. For example, they receive materials and directions for helping children at home (Corno, 1978).
- In programs where the parents receive training from school personnel to help their children, as well as receiving materials, the children make progress (Gordon, 1969).

Administrators can make a policy that guides teachers to elicit positive, active parental support for their child's education. If teachers can use the parents as a source of energy to help children learn, it could lighten the teacher's load. It is important that parents and teachers feel that they are striving together toward a common goal: to help the student learn necessary skills. Given the large number of two-parent working families some schools have arranged for evening meetings with parents. In this instance, counselors or teachers might be given school day release time.

Staff Development

The secondary principal is required to function as a school manager and as a staff developer. The problem of helping teachers learn the skills required to teach the students in our schools today is the challenge of the 1980's.

The problem in staff development in the past has not been in having too few dollars. The problem has been in delivering a well focused, comprehensive program that will serve the needs of children and teachers. In a study of 20 Teacher Corps sites it appeared that there was little overlap among the categorical programs. Seldom did the personnel from Teacher Centers, Teacher Corps or other categorical aid programs coordinate project planning for teachers and students. Teachers in the schools reported that the activities of several federal programs in a school seemed to fractionate the education of children. Where there are several staff development programs in a school they often compete for teachers' limited time. If each categorical program has a director with his own budget, the directors are likely to think in terms of the program rather than in terms of children and teachers. Isolated pull-out programs seem to work to the disadvantage of children. In schools where the administrator appoints one person to coordinate the several programs, plans can be made as a group for the good of the children needing the services. In the face of dwindling dollars, more than ever schools need a well-focused comprehensive staff development program.

Choosing A Staff Development Program

Often, principals in a district are given a budget for staff development. This allows a given number of days for teacher release time and dollars to attend conferences or hire consultants to come to the school. During the past four years of studying schools we find that principals use these funds in very different ways. Some principals tell their staffs that each person can attend, for example, two conferences. They then provide a list of conferences that are acceptable. It is important that principals provide for continuity or follow-up to see how the teachers have benefitted from the conference. If they do not, teachers will not have the opportunity to share what they learn with their colleagues.

Some of the principals used their funds to establish a schoolwide program. For example, all teachers would attend the Assertive Discipline Program offered by Lee Cantor, or Fred Jones would train a group of teachers to use his classroom management techniques in his program entitled Classroom Management Training Program. These teachers would then teach the entire staff. Other principals have been successful in establishing Madeline Hunter's program for classroom management. One entire high school district near our home base has been trained to use the techniques offered by Sam Kerman to provide Equal Opportunity in the Classroom (See reference notes).

Staff development makes the most difference in teacher behavior change and student achievement when the program is schoolwide. One school in which we work has every teacher teach at least five key

words a week. These words must be central to the course of study. The meaning and the spelling are taught. Misspellings are handled the same way in every class. Over a two-year period, this school significantly increased their spelling and vocabulary scores on a standardized test (Stallings and Mohlman, 1981).

A Model for Staff Development

Every staff development model includes a curriculum and a delivery system. Curriculum means the content and delivery means where, when, how, and number of participants. A good content with poor delivery, or vice versa, is not likely to be effective in brining about change in teacher behavior.

The goal of the Teaching and Learning Institute's Staff Development Program is to help teachers learn to manage their classroom time effectively. The curriculum is based upon research findings. The delivery system is personalized instruction and interactive small group problem solving. The content of the program is derived from research funded by the National Institute of Education. The delivery system was also developed with funds from that agency.*

Esentially our model could be called a Mastery Learning Staff Development Model. It has components similar to Bloom's Mastery Learning Model (Bloom 1976)

Pretest
Observe teachers
Assess what is needed from teacher observation profiles
Start where they are

*The early research was carried out at SRI International in Menlo Park, California.

Inform
- Link theory, practice and teacher experience
- Provide practical examples from classroom situations

Organize and guide practice
- Provide conceptual units of behaviors to change
- Support and encourage behavior change
- Assess and provide feedback
- Help integrate into scheme

Posttest
- Observe teachers
- Provide feedback to teachers
- Provide feedback to trainers

The key features are to: state the objective of the staff development program; select or develop instruments that will measure the behavior of interest; observe and or test teachers to see how they are implementing the instructional strategies before the intervention; provide the intervention; observe the teachers; and measure the behavior change.

Using that model in a quasi-experiment (Stallings, Needels and Stayrook, 1979), treatment teachers implemented 25 out of 31 variables by the end of the school year and their students gained more in reading than did a control group of students. (See Appendix C for a description of the workshops.)

Preparing Teachers to Use Effective Techniques

To provide an effective staff development program for the quasi-experiment we established that the following conditions should be met:

- Adequate time is provided to introduce the program to administrators and then to teachers, and to make clear the links between theories of learning and the research findings.

- Recommendations for behavior change are based upon research findings from classrooms of students similar to the students in the school.

- Recommendations for personal change are based upon an objective, understandable profile of each teachers' observed behaviors.

- Teachers' observation profiles are confidential and provide a basis for staff development rather than evaluation.

- A series of workshops will assist teachers in learning how to implement the recommendations.

- Teachers can select one or two of the changes recommended on their profile of behavior to try in their classrooms the next day.

- Each week time is provided to discuss what teachers found they could change and what was difficult to change.

- Group size is kept small enough so that each teacher's problems of implementing the recommendations can be adequately discussed and practical suggestions can be received each week.

- The training leader encourages teachers to share their techniques for effectively managing time and student behavior, and for working toward more effective administrative policies in regard to the use of time.

- The training leader is supportive of the teacher's effort to change; and (while recognizing problems with students, parents, and administrators) establishes a forum where solutions to the problems will be generated rather than just airing the problems.

- The training leader requests teachers to do some homework activity to increase awareness of the class structure, e.g., keeping a seating chart of to whom the teacher speaks during the class period or of which students are off-task during the beginning, middle, and end of period. Teachers can then evaluate whether class activities are appropriate, or student seating is appropriate.

- The training leader acts as a role model for teachers i.e., starts on time, is clear in expections, stays on-task, distributes interactions to all participants, is supportive and guiding, respects confidentiality, respects individual teacher differences (experience, training, school environment, personal attributes).
- Teachers are informed that their behavior change will be measured at the end of each semester and that only they will receive the information.
- Time, place, and length of meetings are convenient for teachers.
- Some type of incentive is provided: release time, stipend, credit.

Organizing Staff Development Activities

In organizing staff development activities it is important to start where teachers are in their development. Then link the new information to teachers' prior experiences, and provide assistance to integrate the change.

Start Where Teachers Are and Recommend Specific Change (Pretest)

Any staff development program should have an accountability plan. It is important to know whether teachers are implementing the program. Teachers will differ in where they start. We found that all teachers were using some of the desired behavior to an acceptable degree at the pretest. All teachers needed to increase or decrease some behaviors. Our objective was to help as many teachers as possible to implement as many of the program variables as possible. To know whether we met our objective, teacher behavior had to be observed on a quantitative observation instrument. In a recent study of administrative leadership style, in addition to behavior change, teachers' feelings of efficacy were expected to change as a

result of the training. Efficacy cannot be observed, therefore we used a survey instrument. The point is, the objective of the program needs to be assessed. If stress reduction is the objective - is stress reduced? by how much? for how long?

Inform: Link Theory, Practice and Experience

Teachers need to know the what and the why. Thus, the training activities themselves should start with linking the research finding to learning theory.

For example, we have a finding that indicates oral reading is related to secondary students' reading gains. Why might that be so? It is that secondary students achieving at the 1st-4th-grade reading level were the most positively affected by oral reading. Learning theory tells us that at that level it is important for students to hear the words and say the words, as well as write them and read them silently. Using all modalities helps integrate the learning. Silent reading or filling in blanks in workbooks may be non-learning activities. Our research suggests that in secondary remedial reading classrooms teachers should listen to the student read some of the time. This helps teachers diagnose reading problems as well as providing opportunities for students to have oral input and output.

Organize Conceptually Complete Modules

Activities should be grouped so that they conceptually hang together and build one upon the other. For example, planning the activities that will occur during a class period requires teachers to efficiently take the role, make assignments, pass papers, and

change from one activity to another. It is important to discuss how to effectively conduct the single components, but they are handled as a complete unit.

An interactive instruction module would need to include instruction on how to provide students with new information, link it to student background and experience, check for understanding, reinforce right answers, positively correct, and guide wrong answers to become right. This interactive instruction module also includes making certain that all students receive some questions and positive support. Questions should be delivered at a level that will challenge but not overwhelm. Each module should go from the simpler activities to more complex ones all combining the what with the why and the how.

Follow up Training with Assessment of Change (Posttest)

After the intervention has been provided and the teachers have had the opportunity to try the instructional methods in their classrooms, teachers should be observed again. This second observation serves as a posttest and provides teachers with feedback on the degree to which they are implementing the program. The posttest also provides the trainer with feedback regarding the effectiveness of the training program.

Our experience in training over 150 teachers of all ages and experience range is that they can and do change behavior when given specific feedback on their own behavior and a guided practice period.

Summary

Some of the most important points to emerge from the research on effective schooling for students who must gain basic skills are:

- Teachers need to be interactive and directly involved with students to keep them on-task.
- Teachers should distribute questions to all members of the class and be supportive and guiding in their feedback.
- Teachers should offer several activities during a class period so that students can develop listening, speaking, reading and writing skills. This helps students integrate information.
- Teachers need a well focused, comprehensive, continuous staff development program to gain the skills needed to be effective teachers.
- Schools should keep distractions that intrude upon classroom time to a minimum.
- Schools should have a consistent and enforced policy for absences, tardiness, and misbehavior.
- Schools should gain parent participation and support.
- Effective schools are a friendly place to be--teachers are available to students, schools are kept in good repair, student success is recognized throughout the school (Rutter, 1979).

Teachers need help to effectively teach the students in their classrooms. The onus is upon school administrative staffs to select a training curriculum that is focused upon school improvement. Further, the program should be comprehensive and on-going with opportunities for teachers to receive feedback on their progress. It is important that every program should be evaluated for effectiveness by observing teacher behavior before and after the intervention and then measuring teacher change. The impact

upon student achievement and absence rate should then be evaluated. The bulwark of public education is being challenged and it is imperative that the teachers in our schools are prepared to meet that challenge.

REFERENCE NOTES

1. Assertive Discipline is done by Dr. Lee Cantor, Fremont, California.

2. Classroom Management Training Program is conducted by Dr. Frederick Jones, Santa Cruz, California.

3. Increasing Teaching Effectiveness is a four part workshop series conducted by Dr. Madeline Hunter, Los Angeles, California.

4. Equal Opportunity in the Classroom is done by Dr. Sam Kerman, the Los Angeles County Department of Education. The program now goes by a new name. It is now called TESA, Teacher Expectations and Student Achievement.

5. The Teaching and Learning Institute directed by Dr. Jane Stallings is located in Mountain View, California.

6. Diagnostic Perspective Ready System, Planning and Development Branch, Department of Research and Development, Cincinnati Public Schools, 1978.

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APPENDIX B

Percentage of Student Time Spent in Activities for Three Types of Mathematics Classes*

Variables	Type I	Type II	Type III
Instruction	14. %	25. %	30. %
Review	8. %	21. %	23. %
Written Assignments	34. %	15. %	11. %
Teacher Management/No Students	24. %	20. %	15. %
Social Interactions	11. %	13. %	13. %
Students Uninvolved	11. %	6. %	4. %
Discipline	4. %	.20 %	.05 %

Type I = General math or Pre-Algebra

Type II = Algebra I, Geometry

Type III = Algebra II, Trigonometry, Calculus

* Some categories are overlapping and the columns will not sum to 100%

APPENDIX A

Distribution of Time Across Activities in Four Ability Groups in Secondary Reading Classrooms

	Group I ($\bar{X}$ Percent)	Group II ($\bar{X}$ Percent)	Group III ($\bar{X}$ Percent)	Group IV ($\bar{X}$ Percent)
Interactive On-Task Activities:				
Reading aloud	21%	9%	1%	1%
Instruction	16	11	17	10
Discussion	12	5	3	1
Drill and Practice	4	4	4	2
Praise/support**	19	16	7	11
Corrective feedback**	20	16		12
Non-Interactive On-Task Activities:				
Classroom management	12	15	17	27
Reading silently	9	16	12	21
Written assignments	4	22	23	28
Off-Task Activities:				
Social interactions	5	6	3	8
Students uninvolved	6	4	4	9

Notes: Group I--Low pretest (students at 2.5 - 3.7 grade level) gain: 4.8 - 5.4.

Group II--Mod pretest (students at 4.2 - 5.8 grade level) gain: 5.5 - 7.4.

Group III--High pretest (students at 6.4 - 8.5 grade level) gain 7.8 - 9.5.

Group IV--No gain (students at 3.8 - 9.3 grade level) gain 3.8 - 9.5.

$\bar{X}$ = Group mean.

*These activities may occur simultaneously; therefore, the sum is greater than 100%.

**This variable is reported as frequency of observed occurrence per 45 minute period.

Appendix C

Description of the Workshops

Workshop 1 provides each teacher with a profile of his or her observed behavior (see Figure C-1). The observation variables are listed in the left column. These are variables used in the study of Teaching Basic Reading Skills in Secondary Schools (Stallings, Needels and Stayrook, 1979). They have considerable face validity which makes the findings understandable to teachers. The fact that the findings were generated from classes similar to the ones in which the teachers were working lends credibility to the research. The variables used in the study are very specific and translating them into recommendations for teachers is not a difficult task. Each teacher receives his/her own set of recommendations for behavior change based upon three days of observation in a class of his/her choice. For example, we observed Sam Jones' period No. 3 prior to a series of inservice workshops. He received the behavior profile shown in Figure 1. The X indicates Sam's pre-training observation. The line down the middle is the mean for approximately 100 classes. Sam Jones was spending 46% of the class time in management tasks (see pretest score for the first variable). This indicates that Sam was spending approximately one half of the class time not being involved with students, e.g., grading papers or keeping records. The mean for all teachers on this variable was 28%. After interpreting the study findings to Sam we made the recommendations shown in the left column. Our recommendation was to provide more instruction, more interaction, more feedback and do less paper grading and record keeping during class time.

More and less are defined in terms of percent of time spent in specific activities or in terms of frequencies of interactions. These recommendations are guided by the level of student achievement. To succeed, lower achieving students require more auditory input and more oral expression than do higher achieving students. The data on Table C-1 are based on analysis of variance comparing effective teaching processes for three levels of achievement of secondary students and the ineffective teaching processes in classrooms where students made little or no gain. Teachers with students achieving below the fourth grade level will be encouraged to provide oral reading approximately 20% of the time, oral instruction approximately 16% of the time, etc. Teachers with students achieving above the sixth grade level would not be encouraged to do as much oral reading but the amount of instruction is about the same.

The remaining workshops in the series provide the assistance teachers need to carry out the recommendations.

In Workshop 2 the achievement level of the students in the class chosen for study are used to determine more exactly how students should be grouped, how time should be spent and how reading should be approached. Methods to develop vocabulary and word concepts are described for each achievement group. Science, math and social studies teachers are given practical suggestions of how to help low achieving students develop a vocabulary to understand the key concepts of the course content. Recommendations for assessing student reading ability are provided. Some schools have very little easily-accessed information for secondary students.

TEACHER NAME: SAM JONES

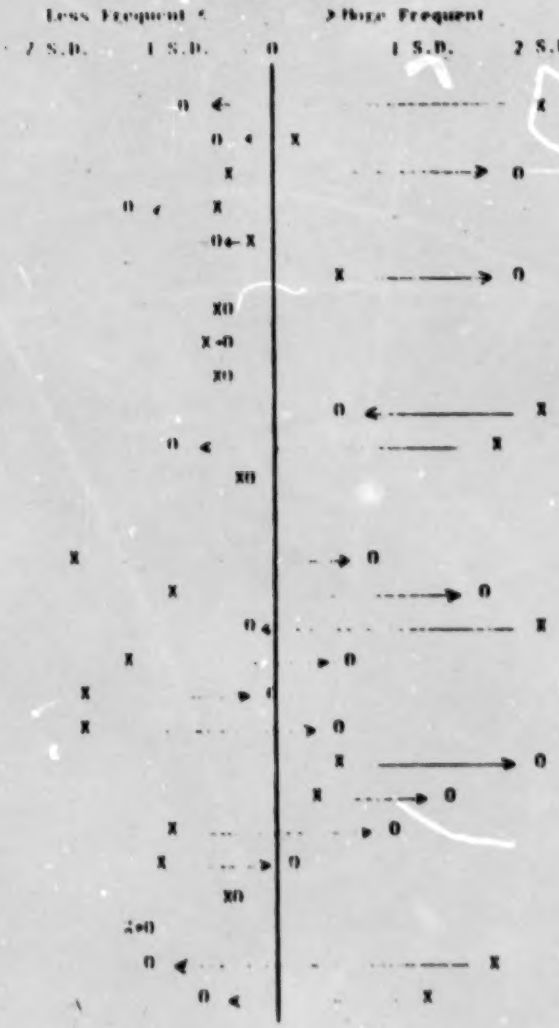
LAKEWOOD HIGH SCHOOL

WASHINGTON UNIFIED SCHOOL DISTRICT

Figure C-1

STANDARD DEVIATIONS FROM THE MEAN

Mean for All Classes



Snapshot Variables	Recommendation	All Classes	Sam's Class Pre	Sam's Class Post	Implementation
Teacher class manage/no students	Less	28.	46.	07.	✓
Total silent reading	Less	08.	09.	05.	✓
Total reading aloud	More	09.	06.	29.	✓
Total making assignments	OK	06.	04.	00.	✓
Total instruction	More	10.	18.	13.	
Total discussion	More	02.	04.	18.	✓
Total practice drill	More	01.	00.	00.	
Total written assignments	OK	27.	17.	21.	✓
Total test taking	More	02.	00.	00.	
Total social interaction	Less	04.	15.	07.	✓
Total student uninvolved	Less	05.	15.	01.	✓
Total discipline	OK	00.3	00.	00.	✓
Interaction Variables					
Teacher to individual student	More	89.	48.	113.	
Teacher to groups	More	13.	01.	38.	✓
Teacher to class	OK	44.	137	37.	
Teacher direct question, reading	More	41.	23.	50.	✓
Student response, reading	More	42.	19.	41.	✓
Teacher praise, support, reading	More	13.	08.	34.	✓
Teacher corrective feedback	More	13.	19.	33.	✓
All interactions/reading	More	208.	230.	304.	✓
All interactions/behavior	OK	04.	01.	11.	✓
All interactions/positive	More	04.	00.	04.	
All interactions/negative	OK	00.	00.	00.	✓
Student comments, assignment	OK	09.	01.	13.	✓
All interactions/class assignment	Less	69.	144.	17.	✓
Teacher manage class, no student	Less	31.	71.	05.	✓

X = Pre-Training Observation
0 = Post-Training Observation
▶ = Direction of change
✓ = Correctly Implemented

PROFILE OF SAM JONES' PRE- AND POST-TRAINING OBSERVATIONS

Table C-1

DISTRIBUTION OF TIME ACROSS ACTIVITIES IN FOUR ABILITY GROUPS IN SECONDARY READING CLASSROOMS*

	Group I ($\bar{X}$ Percent)	Group II ($\bar{X}$ Percent)	Group III ($\bar{X}$ Percent)	Group IV ($\bar{X}$ Percent)
Interactive On-Task Activities				
Reading aloud	21%	9%	1%	1%
Instruction	16	11	17	10
Discussion	12	5	3	1
Drill and practice	4	4	4	2
Praise/support**	19	16	7	11
Corrective feedback**	20	16	4	12
Non-Interactive On-Task Activities				
Classroom management	12	15	17	27
Reading silently	9	16	12	21
Written assignments	4	22	23	28
Off-Task Activities				
Social interactions	5	6	3	8
Students uninvolved	6	4	4	9

Notes: Group I--Low pretest/high gain
Group II--Moderate pretest/moderate gain
Group III--High pretest/moderate gain
Group IV--No gain.
$\bar{X}$ = Group mean.

*These activities may occur simultaneously; therefore, the sum is greater than 100%

**This variable is reported as frequency of occurrence per 45-minute period.

Workshop 3 focuses upon making good use of the total class period. Efficient means of making assignments and making clear expectations for quality and quantity of work are discussed. If classrooms have students of different achievement levels, teachers are guided to teach two or three groups to accomodate these differences. Lesson plans for several groups or models of group instruction are provided and teachers are guided to plan two or three activities for each group rather than just reading silently or doing workbooks all period.

Workshop 4. Because so many behavior variables were found to be negatively correlated with reading achievement, this workshops provides specific recommendations for behavior management. Each teacher receives a packet to read before the session. During the session, the leader asks the teachers what was the most difficult behavior problem they had to handle the past week. In each of the prior sessions, the teachers have eventually mentioned the same problems: tardiness, absenteeism, arguments, shouting out demeaning remarks, and physical fights. The leaders ask how each teacher handled such situations. Some of these incidents are role played. Ways of handling such situations are suggested by the teachers and the trainers. Teachers then formulate recommendations based on the research findings and group suggestions. Techniques for motivating students toward good behavior and achievement are also discussed in the fourth session.

Workshop 5 provides instruction and practice in a direct method of providing instruction, questioning and feedback. Teachers are encouraged to provide some verbal instruction and ask students (by name - not by volunteers) to respond. If the response is correct the teachers provide some praise or acknowledgement feedback to the student that the answer is correct. This needs to be specific and clear. If the response is incorrect the teachers are trained to provide some form of positive corrective feedback. Such feedback might be to probe by asking the question differently or to provide some more information and re-ask the question.

Workshops 6 and 7 are conducted after observations at the end of each semester to see whether recommendations from the earlier workshops were followed. New profiles are prepared for each teacher in the form of transparencies so that the second and third profiles can be laid over the first profile to examine changes in teacher behavior. Feedback based on these profiles of teacher behavior is given to each teacher individually. Recommendations for continued behavior change are made.

Staff Development Model

This staff development model requires that the number of teachers being trained is kept small (five to seven). The training sessions are 2.5 hours long. They are conducted once a week for five weeks in November or February, either after school hours or during school time. The school system either provides monetary incentives, release time or inservice credit. The content of the workshops is guided by the findings from research on effective teaching. Research findings are presented and theories of child development are discussed. The theory and research are then grounded in practical classroom examples, teachers' experiences and problem solving skills. The training process is interactive and supportive. Teachers are helped to find methods to work with the students in their care and to find ways to work effectively in their school situation. The focus of the five workshops is to help teachers think in terms of using time effectively, provide supportive and interactive instruction, and motivate each student to stay on-task.